What is claimed is:

1. A display device comprising:

a display cell which includes a display optical element and displays an image by controlling light transmission based on a drive voltage applied to the display optical element; and

a voltage supply circuit which randomly determines a polarity of the drive voltage in a predetermined frame, and which determines a polarity of the drive voltage in a frame subsequent to the predetermined frame by reversing the randomly determined polarity.

2. The display device according to claim 1, wherein said display cell has a plurality of pixels arrayed in a dot matrix form having rows and columns, and said voltage supply circuit performs random polarity determination in units of row constituting the dot matrix.

3. The display device according to claim 2, wherein said voltage supply circuit supplies the drive voltage such that adjacent pixels in the same row are different from each other in polarity.

4. The display device according to claim 1, wherein said voltage supply circuit alternately repeats the random polarity determination and the polarity determination by reversal.

5. The display device according to claim 1, wherein said voltage supply circuit repeats the polarity determination by reversal multiple times after the random polarity determination.

6. A liquid crystal display device comprising:

a liquid crystal display cell having a plurality of pixels arrayed in m rows and n columns, and having a plurality of scanning lines and signal lines respectively for transmitting scanning signals and display signals to each of the pixels;

a scanning signal supply circuit for supplying the scanning signals to the plurality of scanning lines;

a display signal supply circuit for supplying the display signals of different polarity to adjacent signal lines; and

a control unit for supplying a polarity instruction signal to the display signal supply circuit based on a random number for the pixel positioned in a predetermined column in each pixel row.

7. The liquid crystal display device according to claim 6, wherein said scanning signal supply circuit supplies each of the pixels in a first frame with polarity determined by the polarity instruction signal based on the random numbers, and supplies each of the pixels in a second frame with polarity reverse to that of the first frame.

8. The liquid crystal display device according to claim 6, further comprising:

a dot reversal drive mode for realizing a first frame in which adjacent pixels have a different polarity from each other, and a second frame in which the polarity of each pixel thereof is different from that of the first frame, the second frame being subsequent to the first frame.

9. A liquid crystal display device of an active matrix type having an element for applying a drive voltage to a liquid crystal material, the liquid crystal display device comprising:

a liquid crystal display cell having a plurality of pixels arranged in a dot matrix form and the liquid crystal material sealed therein;

a control unit for transmitting generated random numbers; and

a polarity instruction unit for applying a polarity corresponding to each of the random numbers received from said control unit to a predetermined pixel, and for instructing positive and negative polarities of other pixels present in the same row to be alternately arrayed by using the polarity of the predetermined pixel as a reference.

10. The liquid crystal display device according to claim 9, wherein the plurality of pixels are arrayed in m rows and n columns (m and n are positive integers), said control unit sequentially generates m random numbers for each predetermined frame, and said polarity instruction unit determines the polarity of the predetermined pixel by allocating the m random numbers to each row.

11. The liquid crystal display device according to claim 9, wherein said polarity instruction unit determines a polarity of the predetermined pixel, and determines polarities of other pixels in the row in which the predetermined pixel exists by using the polarity of the predetermined pixel as a reference.

12. A liquid crystal display device comprising:

a liquid crystal display cell having a plurality of pixels arrayed in m rows and n columns (m and n are positive integers), the plurality of pixels including a reference pixel for determining a polarity array of display signals in each pixel row, and a plurality of scanning lines and signal lines respectively for transmitting scanning signals and display signals to each pixel;

a scanning signal supply circuit for supplying the scanning signals to said scanning lines; and

a display signal supply circuit for supplying the display signals to the signal lines,

wherein said display signal supply circuit determines a polarity of the display signal to be supplied to the reference pixel of each pixel row based on random number in a predetermined frame, and determines a polarity in a frame subsequent to said predetermined frame by reversing said polarity of the predetermined frame.

13. The liquid crystal display device according to claim 12, wherein said display signal supply circuit determines polarities of other pixels in a row having the reference pixel therein such that polarities of the pixels are regularly arrayed.

14. The liquid crystal display device according to claim 13, wherein said display signal supply circuit determines polarities of other pixels such that each of the pixels in the same row has a polarity reverse to that of adjacent pixels.

15. A liquid crystal display device comprising:

a liquid crystal display cell having a plurality of pixels arrayed in a dot matrix form;

a display signal supply circuit for supplying display signals to the plurality of pixels such that polarities of the pixels constituting each row are regularly arranged, and the polarities of pixels constituting each column are irregularly arranged; and

a scanning signal supply circuit for supplying scanning signals to the plurality of pixels.

16. The liquid crystal display device according to claim 15, wherein said display signal supply circuit supplies the display signal based on random numbers in a predetermined frame, and supplies the display signals whose polarities are reverse to those of said predetermined frame in a frame immediately after said predetermined frame.

17. A driving method of a liquid crystal display device in which a polarity of a voltage applied to each pixel is reversed for each frame, the method comprising the steps of:

applying voltages of polarities based on random numbers for a first frame; and

applying voltages of polarities reverse to those of the first frame for a second frame immediately after the first frame.

18. The driving method for the liquid crystal display device according to claim 17, wherein said liquid crystal display device is a liquid crystal display device of an active matrix type provided with elements for applying drive voltages to a liquid crystal material, and in said first frame, the polarities of voltages applied to pixels are randomly arrayed in a scanning direction, and the polarities of voltages applied to the pixels are regularly arrayed in a direction orthogonal to the scanning direction.